

B-0965/03-000/007/0004/001

1. *Prilozheniye k "Voprosam i otvetam na voprosy" i "Mirov", no. 3, 1967, 1-10.*

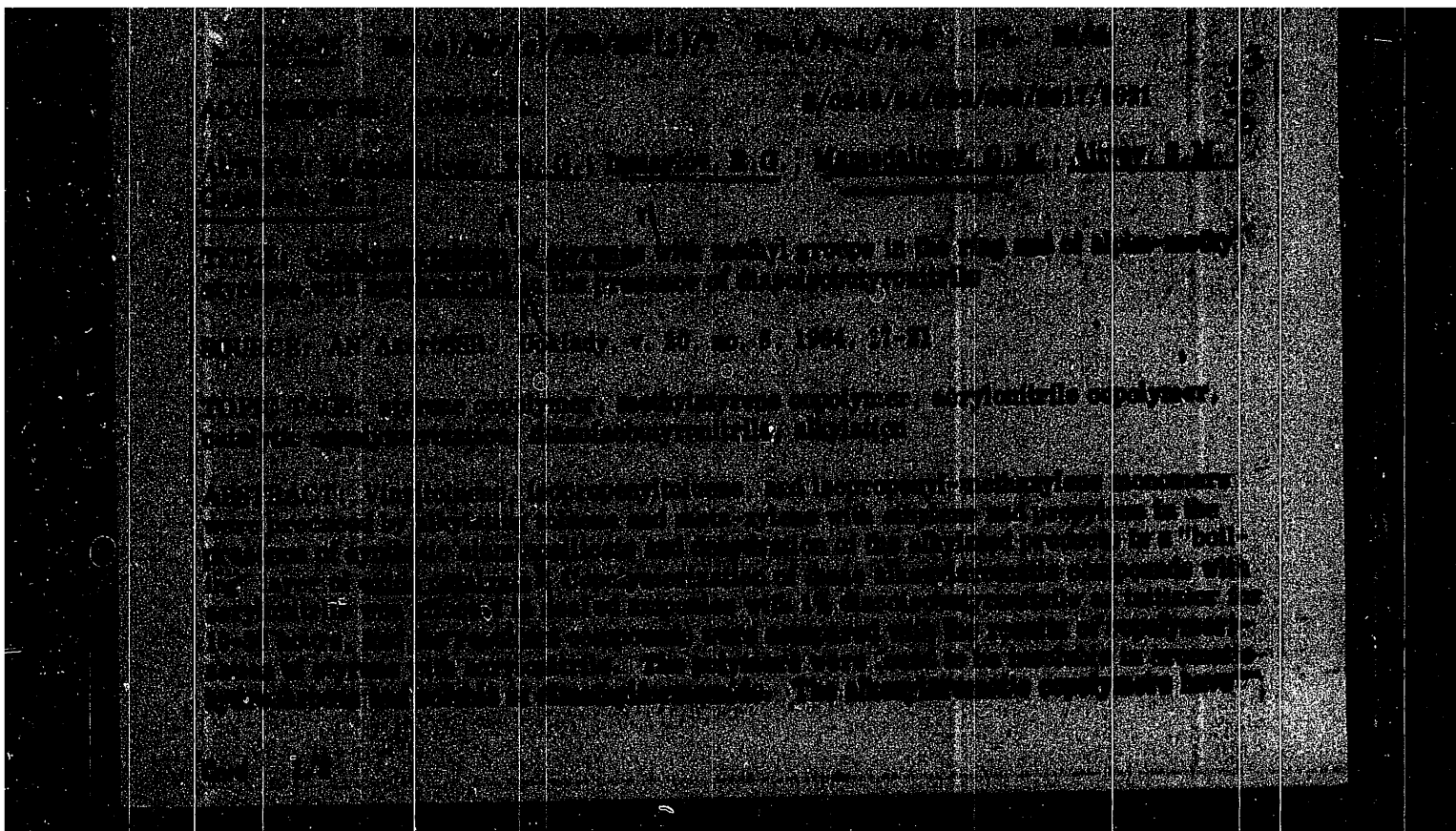
of the reaction of the initiated polymerization of allyl aromatic compounds of the type $\text{CH}_2=\text{CH}-\text{Ar}$, where Ar is a phenyl resin obtained by oxidative polymerization of gasoline, using various initiators and their bi- and tri-phenyl derivatives. It is shown that with temperatures of 80-150°C, initiator concentrations of 0.001-0.01 mole/liter and 10-hr polymerization periods, the conversion of allyl aromatic compounds is 50-75%. The molecular weight of the polymers obtained varies between 50 and 1750. Polymers are obtained by a molecular weight of 20,000 to 40,000 and a glass point of 15-150°C, which corresponds to the softening point observed in the

SHAKHMURADOV, M.K.; VOROB'YEV, V.A.; ZEYNALOV, B.K.;
MAMEDALIYEV, G.M.; ALIYEV, S.M.

Manufacture of face tiles from compositions of polystyrene and petroleum
polymer resins with the aid of the plasticizer "Plastiazan 1". Azerb.
khim. zhur. no.1:15-17 '65. (MIRA 18:7)

1. Institut neftekhimicheskikh protsessov AN AzerSSR.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000020-6



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MAMEDALIYEV, Yu.G.; ISMAILOV, R.G.; MAMEDALIYEV, G.M.; ALIYEV, M.M.;
GASANOVA, Sh.I.

Copolymerization of styrenes methylated in the nucleus and
 α -methylstyrenes with acrylonitrile in the presence of
dinitrile of azoisobutyric acid. Dokl. AN Azerb. SSR 20
no.8:17-21 '64. (MIRA 17:12)

1. Institut neftekhimicheskikh protsessov AN AzerSSR im.
Yu.G. Mamedaliyeva.

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02/001/68/000/000/0011/0023

[illegible]

1. The effect of the composition of the C₂H₄ fraction of pyrolysis tars on the rate of polymerization of acrylonitrile in benzene.

100-361044-1000

[illegible]

hydrocarbon composition of the 130-185° fraction of the petroleum was investigated using the different reagent phases, different solvents, distillate, paraffin, and polyethylene glycol. The hydrocarbons of the composition C₁₀-C₁₅ were quantitatively determined. The presence of a high content of aromatic hydrocarbons in the distillate was observed. The authors suggest that the identification of these hydrocarbons will be of great interest for the 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818,

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000020-6

Dehydrogenation of alkyl aromatic hydrocarbons in a fluidized
bed of various oxide catalysts. Dokl. AN Azerb. SSR 20 no.5:
7-10 '64. (MIRA 17:8)

1. Institut neftekhimicheskikh protsessov AN AzSSR imeni
Yu.G.Mamedaliyeva.

ACCESSION NR: AP4041487

respectively. Very similar results were obtained by the copolymerization of the narrower 130-160 or 160-190C fractions of the unsaturated pyrolysis products, which contained more unsaturated and less aromatic compounds, with acrylonitrile under the same conditions. The authors conclude that copolymerization of the unsaturated fraction of pyrolysis products with acrylonitrile proceeds with a high degree of conversion of the aromatic monomers and leads to the formation of copolymers with a number of valuable properties (melting point and solubility characteristics). Orig. art. has: 3 tables.

ASSOCIATION: INKhP im. Yu. G. Mamedaliyeva

SUBMITTED: 17Dec63

ENCL: 00

SUB CODE: OC

NO REF SOV: 005

OTHER: 000

Card 2/2

ACCESSION NR: AP4041487

S/0249/64/020/003/0023/0026

AUTHOR: Mamedaliyev, Yu. G.; Ismaylov, R. G.; Mamedaliyev, G. M.; Aliyev, S. M.; Gasanova, Sh. I.

TITLE: Copolymerization of liquid unsaturated pyrolysis products with acrylonitrile

SOURCE: AN AzerbSSR. Doklady*, v. 20, no. 3, 1964, 23-26

TOPIC TAGS: acrylonitrile, acrylonitrile copolymer, pyrolysis product, gas pyrolysis, unsaturated pyrolysis product, copolymerization, styrene fraction, indene fraction, diazoisobutyronitrile

ABSTRACT: Copolymerization of the 110-190C fraction of unsaturated pyrolysis products (60% unsaturated and 40% aromatic) with acrylonitrile (90:10 — 20:80) in the presence of 1% diazoisobutyronitrile at 75C for 30 hours led to copolymers containing 0.7-1.2 moles of acrylonitrile per mole of unsaturated pyrolysis product in yields of 24-90%. Practically no homogeneous polyacrylonitrile or polymeric pyrolysis product were formed. The N content in the copolymer increased with the proportion of acrylonitrile used, and the rates of conversion were 43.3-96.8 and 86-98% for the pyrolysis product and acrylonitrile,

Card 1/2

MAMEDALIYEV, Yu.G.; ALIYEV, S.M.; MAMEDALIYEV, G.M.; SARKISYAN, A.A.; AGAYEVA, M.A.

Cation polymerization of nucleus-methylated styrenes, α -methylstyrenes, and vinylisopropenylbenzenes in the presesnce of TiCl_4 . Dokl. AN Azerb. SSR 20 no.1:21-26 '64. (MIRA 17:4)

1. Institut neftekhimicheskikh protsessovo im. Yu.G.Mamedaliyeva AN AzerSSR.

MAMEDALIYEV, G.M.; SIMASEKO, V.V.; SHCHIPAKOVA, L.M.

Investigating the composition of $C_8 - C_9$ tar from the pyrolysis of petroleum gases by gas-liquid chromatography. Neftekhimia 4 no.4: 618-623 JI-Ag '64. (MIRA 17:10)

1. Institut neftekhimicheskogo sinteza im. A.V. Topchiyeva AN SSSR.

SI 21406-10

ACCESSION NR. APA 49432

3

highest yield achieved at the maximum concentration and reaction time, whereas azio-
methylcyclohexane was noticeably inactive as compared with the other tested initiators at
the highest time and concentration. The polymers, precipitated with heptane and petro-
leum ether, had melting points of 41-113°C, specific gravities of 1.08-1.11 and good di-
lution properties. The experimental results were shown to be usable for the production
of a new type of glue. Only art. has 5 tables and 5 chemical equations.

ABSTRACT: None

SUBMITTED: 00

ENCL: 00

SUB CODE: 00

NO. 775/00

OTHER: 000

PAGE NO.

6

DE 1103, *Agrostoides alpinus*, *in: Journal of the Royal Botanical Society of London*, vol. 3, 1904, 91-97

Diisopropylbenzene hydroperoxide was obtained in 4-7% yield by vacuum distillation of gas containing 50% styrene, 53% methylstyrene, approximately 10% *p*-xylene, and approximately 5% isopropylbenzene, and passed through glass tubes at 73-80°C to give 3-36% yield of 9000-33,000, depending on reaction time and on the initiator used. The activity of the initiators decreased in the order: diisopropylbenzene monohydroperoxide, isopropylbenzene monohydroperoxide, and diisopropylbenzene monohydroperoxide. The radical chain mechanism of various initiators is discussed. Diisopropylbenzene monohydroperoxide gave the

MAMEDALIYEV, Yu.G. [deceased]; ISMAYLOV, R.G.; ALIYEV, S.M.; MAMEDALIYEV, G.M.;
SARKISYAN, A.A.; AGAYEVA, M.A.

Polymerization of unsaturated compounds of liquid products obtained
in hydrocarbon pyrolysis in the presence of $TiCl_4$. Dokl. AN Azerb.
SSR 19 no.11:19-22 '63. (MIRA 17:3)

1. Institut neftekhimicheskikh protsessov AN AzerSSR.

MAMEDALIYEV, Yu.G. [deceased]; MAMEDALIYEV, G.M.; ALIYEV, S.M.; GUSEYNOV, N.I.

Preparation of nucleus-methylated styrenes, α -methylstyrenes, and vinyl-isopropenylbenzene by the heterogenous vapor-phase alkylation and dehydrogenation of aromatic hydrocarbons in a fluidized bed of oxide catalysts. Dokl. AN Azerb. SSR 19 no.1:13-18 '63. (MIRA 16:4)

1. Institut neftekhimicheskikh protsessov AN AzSSR.
(Benzene derivatives) (Styrene) (Hydrocarbons)

MAMEDALIYEV, Yu.G.; ISMAYLOV, R.G.; MAMEDALIYEV, G.I.; ALIYEV, S.M.
GASANOVA, Sh. I.

Polymerization of a mixture of vinyltoluenes in the presence
of various initiators. Azerb. khim. zhur. no.5:35-38 '63
(MIRA 17:8)

POLYMERIZATION OF VINYL ..

S/249/62/018/003/001/002
I018/I218

method of polymerization, see Mamedaliyev et. al., Azerb. Khim. Zhur., 1 4 1962. It has been shown that the optimal temperature for the polymerization is 100°C, the concentration of the initiator, 1 0-3 %, duration of the reaction, 25-50 hours. The yield of polymers with M.P. at 195-205°C was 20-46 weight % (from the unsaturated hydrocarbons used) There are 3 tables

Association: JNKhP

Submitted: December 25, 1961

Card 2/2

S/249/62/018/003/001/002
I018/I218

Authors Mamedaliyev Yu. G. (Deceased), Mamedaliyev, G. M., Aliyev, S. M., and Gasanova, Sh. I.

Title POLYMERIZATION OF VINYL NAPHTHALENE COMPOUNDS FROM TAR OBTAINED BY GAS PYROLYSIS

Periodical *Akademiya nauk Azerbaydzhanskoy SSR. Doklady*, 18(3), 1962, 17-20.

Text: A previous communication deals with the polymerization of styrene and indene mixed tar fraction of gas pyrolysis in the presence of various initiators. It has been shown that the polymers obtained had molecular weight of 1000-2500 and temperature of softening at 120-150°C. In the present communication, the results of studies on the polymerization of vinyl naphthalene fractions of liquid products of gas pyrolysis in the presence of iso-propyl-benzene hydroxyperoxide are presented. The 250-260°C and 260-300°C fractions isolated from tars of gas pyrolysis by vacuum rectification were used. For the description of the apparatus and

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MAMEDALIYEV, M.G., inzh. (Baku); KRONGOL'D, Ye.S., inzh. (Baku);
TOCHILOV, V.I., inzh. (Baku)

Two cases of accidents in the construction of a large water
conduit. Vod.i san. tekhn. no.10:33-34 O '62. (MIRA 15:12)
(Aqueducts) (Building--Accidents)

ACCESSION NR: AR3000549

bond takes place in mixtures of cyclohexene and styrene with aromatic hydrocarbons. Under these conditions a hydrogenation of the benzene ring does not occur. T. Ogibina

DATE ACQ: 21 May 63

ENCL: 00

SUB CODE: 00

ACCESSION NR: AR3000549

S/0081/63/000/007/0450/0450

SOURCE: RZh, Khimiya, Abs, 7868

AUTHOR: Mamedaliyev, Yu. G.; Mamedaliyev, G. M.; Aliyev, S. M.;
Sarkisyan, A. A.

TITLE: Selective hydrogenation of styrene and cyclohexene in the presence of aromatic hydrocarbons

CITED SOURCE: Azerb. khim. zh., no. 4, 1962, 3-7

TOPIC TAGS: hydrogenation of styrene and cyclohexene

TRANSLATION: A study was made of the hydrogenation of styrene, cyclohexene, aromatic hydrocarbons C sub 6 - C sub 9, and of their mixtures in the presence of the catalyst Ni/kieselguhr, and the optimal conditions of hydrogenation were determined. It is shown that at atmospheric pressure and 160-240° a selective hydrogenation of the ethylene

Card 1/2

MAMEDALIYEV, Yu.G. [deceased]; MAMEDALIYEV, G.M.; ALIYEV, S.M.; MAYSTER, E.I.

Alkylation of phenol with olefins in the presence of synthetic
aluminosilicates. Azerb.khim.zhur. no.2:11-14 '62. (MIRA 16:3)
(Phenol) (Alkylation) (Olefins)

MAMEDALIYEV, Yu.G. [deceased]; MAMEDALIYEV, G.M.; ALIYEV, S.M.; GUSEYNOV,
N.I.; GADZHIYEV, G.G.

Alkylation of toluene, xylenes, and trimethylbenzenes with
olefins in the presence of synthetic aluminosilicates. Azerb.
khim.zhur. no.2:3-9 '62. (MIRA 16:3)
(Benzene derivatives) (Alkylation) (Olefins)

Polymerization of the ...

S/081/63/000/004/043/051
B160/B186

ties were studied. It was established that molding materials based on the 130 - 150°C fraction polymers and polystyrene are heat-resistant to 101 - 102° and 106 - 108°C respectively (according to the Vicat test); the Brinell hardnesses are 14 - 15 and 15 - 16 kg/mm²; the tangents of the angle of dielectric loss at a current frequency of 10 cps are 0.0006 - 0.0007 and 0.0002 and the dielectric constants at a current frequency of 10 cps are 2.6 and 2.6. [Abstracter's note: Complete translation.]

Card 2/2

S/081/63/000/004/043/051
B160/B186

AUTHORS: Mamedaliyev, Yu. G., Mamedaliyev, G. M., Aliyev, S. M.,
Efendiyev, A.

TITLE: Polymerization of the 130 - 160°C styrene fraction of resin
obtained from the pyrolysis of hydrocarbon gases in the pres-
ence of isopropyl benzene hydroperoxide

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 4, 1963, 605, abstract
4T41 (Azerb. khim. zh., no. 1, 1962, 17 - 22 [Summary in Azerb.])

TEXT: An investigation was made into the polymerization of the 130 -
160°C styrene fraction of resin obtained from the pyrolysis of hydrocarbon
gases in the presence of isopropyl benzene hydroperoxide. A study was
made of the effect of temperature (80° - 120°C), the duration of the re-
action (10 - 30 hrs) and the amount of initiator (1.25 - 2.98 % by weight)
on the polymerization process; the solid polymer output proved to be 41 %
of the raw material at 80°C with an initiator concentration of 1.25 %
after 30 hrs. Compositions were obtained on the basis of the synthesized
polymers and industrial polystyrene and their physico-mechanical proper-
Card 1/2

L 12307-63

Production of synthetic tars and

6
S/081/63/000/005/064/075

established that compositions made with them possess a variety of valuable physical and mechanical properties. Catalytic reforming of the non-polymerizing part of a polymerizing mixture with benzotoluene fractions of tar of pyrolysis of gases was studied and it was shown that the preliminary obtaining of synthetic resins does not exert a negative influence on the output of the lower molecular weight aromatic hydrocarbons. The characteristics of the starting materials and the obtained products are given. A complex scheme is proposed for treatment of light oil from pyrolysis of hydrocarbon gases, which enables production of synthetic tars, benzene, toluene, xylene and others. T. Danilova).

[Abstractor's note: Complete translation]

Card 2/2

12307-63

RWP(j)/RFP(o)/EWT(m)/BDS ASD Fr-h/Pc-h RM/WW

S/081/63/000/005/064/075 66

AUTHOR: Mamedaliyev, Yu. G., Mamedaliyev, G. M., Aliyev, S. M., Rzayeva, F. D. and Markheyka, V. M.

TITLE: Production of synthetic tars and aromatic hydrocarbons by complex treatment of liquid pyrolysis products

PERIODICAL: Referativnyy zhurnal, Khimiya, no. 5, 1963, 587, abstract 5T24, (Azerb. kimya zh. Azerb. khima, zh. 1962, no. 1. 3 - 15)

TEXT: The polymerization of unsaturated compounds of the 110 - 190° C fraction of pyrolysis tar of gases in the presence of various initiators, (IN) (hydroperoxide of diisopropylbenzenes and others) was investigated. The influence of various factors (temp., concentration of IN and duration of experiment) on the polymerization process was studied. It was shown that at 90° C concentration of IN 1.5 - 4 % and duration of 25 - 70 hours the yield of white powder-like polymer was 25 - 35 % of the weight of the starting materials. Its intrinsic viscosity in benzene is 0.1 - 0.15; mol. weight 10000 - 20000, softening temp. (by the ring and ball method) is 145 - 150° C, spec. gr. 1.05 - 1.1. A test on synthesized tars was conducted and it was

Card 1/2

TOPCHIEV, A.V.; MAMEDALIYEV, G.M.; KAVALEVA, L.S.

Dealkylation of mesitylene and conjugated alkylation of benzene
and toluene in the presence of synthetic aluminosilicates. Izv.
AN SSSR.Otd.khim.nauk no.5:868-876 My '61. (MIRA 14:5)

1. Institut neftekhimicheskogo sinteza AN SSSR.
(Mesitylene) (Benzene) (Toluene) (Alkylation)

Polymerization of unsaturated ...

S/081/62/000/018/044/059
B160/B186

reaction and a rise of temperature. An investigation was also made into the copolymerization (initiator - isopropylbenzene hydroperoxide 2%, 94°C, 100 hrs) of unsaturated compounds of the 160-190°C fraction and styrene at different weight ratios of the components. When the weight ratio of pyrolysis products and styrene is 20:80 the copolymer yield is 93% (melting point 120-125°C). [Abstracter's note: Complete translation.]

Card 2/2

S/081/62/000/018/044/059
B160/B186

AUTHORS: Mamedaliyev, Yu. G., Mamedaliyev, G. M., Aliyev, S. M.,
Babakhanova, T. A.

TITLE: Polymerization of unsaturated hydrocarbons from 160-190°C
fractions of liquid pyrolysis products in the presence of
isopropylbenzene hydroxide

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 18, 1962, 501,
abstract 18P48 (Azerb. khim. zh., no. 5, 1961, 41-46
[Summary in Azerb.])

TEXT: Polymerization of unsaturated hydrocarbons of liquid pyrolysis
products (160-190°C fraction) was carried out in the presence of an
initiator (isopropylbenzene hydroxide, benzoyl peroxide, etc.). The
relationship of the yield (13-30% by weight) and of the properties of
the polymer ($[\eta]$, d_4^{20} , melting point) to the initiator concentration
(1-4% by weight), the duration of the experiment (70-125 hrs) and the
temperature (82, 94°C) was ascertained. The polymer yield is shown to
grow with an increase in the initiator concentration, the duration of the
Card 1/2

MAMEDALIYEV, G.M.; TOPCHIEV, A.V.; VLASOVA, N.D.; ANIKINA, G.N.

Demethylation and isomeric conversion of pseudocumene over aluminosilicates. Izv.AN SSSR Otd.khim.nauk no.4:637-645 Ap '61.
(MIRA 14:4)

1. Institut neftekhimicheskogo sinteza AN SSSR.
(Benzene)

TOPCHIEV, A.V.; MAMEDALIYEV, G.M.; KISLINSKIY, A.N.; ILATOVSKAYA, M.A.;
ANIKINA, G.N.; SIDORENKO, V.I.

Conversions of cyclopentane, dekaline and tetralin into aromatic
hydrocarbons in the presence of aluminosilicates. Neftekhimiya
1 no.2:204-212 Mar-Apr '61. (MIRA 15:2)

1. Institut neftekhimicheskogo sinteza AN SSSR.
(Hydrocarbons)
(Aluminosilicates)

MAMEDALIYEV, Yu.G.; MAMEDALIYEV, G.M.; ALIYEV, S.M.; GUSEYNOV, N.I.

Synthesis of cymenes by the alkylation of toluene with
propylene over aluminosilicates. Azerb.khim.zhur. no.1:39-54
'61. (MIRA 14:8)
(Cymene) (Toluene) (Propene)

NAMEDALIYEV, Yu.G.; NAMEDALIYEV, G.M.; ALIYEV, S.M.; RZAYEVA, F.D.

Xylene production by converting products of catalytic cracking
in the presence of toluene over synthetic aluminosilicates. Dokl.
AN Azerb.SSR 16 no.9:841-846 '60. (MIRA 13:12)

1. INKHP.
(Xylene) (Toluene)

Conversion of Cyclenes on Aluminosilicates. S/062/60/000/006/019/025/XX
Communication 1. Conversion of B020/B060
Cyclohexene Into Tetraalkyl Benzene - and
Dimethyl Napthalene Hydrocarbons

ASSOCIATION: Institut nefiti Akademii nauk SSSR (Petroleum Institute of the
Academy of Sciences USSR)

SUBMITTED: December 19, 1958

card 4/4

Conversion of Cyclenes on Aluminosilicates.
 Communication 1. Conversion of
 Cyclohexene Into Tetraalkyl Benzene - and
 Dimethyl Naphthalene Hydrocarbons

S/062/60/000/006/019/025/XX
 B020/B060

About 40% of cyclohexene is isomerized, over a dimer, to hydrocarbons of the decalin- and octalin series, which are further isomerized, hydrogenolized and dehydrogenized, with tetraalkyl benzenes and dialkyl naphthalenes being obtained as the end products. Basing on the example of cyclohexene conversion the authors believe that in the refining process of petroleum products on aluminosilicates the conversion of cyclic, unsaturated hydrocarbons plays an important part in the formation of aromatic and naphthenic hydrocarbons besides other aromatizing reactions. 50 to 55% of the hydrogen consumed in the conversion process of cyclohexene serves for hydrogenizing polymeric compounds into aromatic and naphthenic hydrocarbons, and 45% for the formation of coke-like condensation products. There are 3 figures, 4 tables, and 24 references: 18 Soviet, 1 Japanese, 3 US, and 2 German.

Card 3/4

Conversion of Cyclenes on Aluminosilicates.
Communication 1. Conversion of
Cyclohexene Into Tetraalkyl Benzene - and
Dimethyl Naphthalene Hydrocarbons

S/062/60/000/006/019/025/XX
B020/B060

The main factors of the process and the characteristics of the reaction products are indicated in Table 1. The apparatus used for the experiments has been described in Ref. 11. No basic difference was observed between the conversion products of cyclohexanol and cyclohexene. The total yield of the monomeric fraction referred to the hydrocarbon fraction of the catalyzate was 57 - 59%, and that of the polymeric fraction was 40 - 41%. The effects of temperature, feeding rate of the initial material, pressure, etc., were examined. The characteristics of the monomeric fraction are indicated in Tables 2 and 3. Table 4 gives the characteristics of the polymeric fraction. The absorption spectrum of the fraction boiling between 190° and 240°C is shown in Fig. 1, the ultraviolet absorption spectrum of the fraction boiling between 260° and 270°C in Fig. 2, and, finally, the absorption spectra of the fractions boiling at 240° - 250°C, 250° - 260°C, and 260° - 270°C are shown in Fig. 3. At atmospheric pressure and temperatures of 300° - 350°C about 60% of cyclohexene is isomerized to methyl cyclopentenes, which are then largely hydrogenized to methyl cyclopentane.

Card 2/4

S/062/60/000/006/019/025/XX
B020/B060

AUTHORS: Topchiyev, A. V., Mamedaliyev, G. M., Shishkina, M. V.,
Anikina, G. N., and Kislinitskiy, A. N.

TITLE: Conversion of Cyclenes on Aluminosilicates. Communication 1.
Conversion of Cyclohexene Into Tetraalkyl Benzene- and
Dimethyl Naphthalene Hydrocarbons

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,
1960, No. 6, pp. 1084-1093

TEXT: The monomeric fraction of the cyclohexene conversion products has
been more or less thoroughly studied in papers by N. D. Zelinskiy and
Yu. A. Arbuzov (Ref. 2), A. F. Plate (Ref. 3), A. V. Frost (Ref. 4), M. V.
Yushkevich-Gavardovskaya, K. P. Lavrovskiy, and others (Ref. 7), A. A.
Petrov and V. V. Shchekin (Ref. 8), as well as I. A. Musayev and V. V.
Shchekin (Ref. 10). These studies have not covered the polymers and their
formation. The article under consideration discusses the results obtained
from the study of the catalytic cyclohexene conversion on aluminosilicates.

Card 1/4

Catalytic reforming of light oil...

29439

S/081/61/000/017/129/166
B117/B102

3 % by weight of xylenes and ethyl benzene. Paraffin, naphthene, and unsaturated hydrocarbons are absent in the catalyzate. This allows aromatic substances to be separated by precise rectification. A small coke deposit is found on the catalyst, which can be easily burned out in the regenerator. The activity of the catalyst is thus virtually restored. The process developed here is more advantageous than the method of purifying liquid pyrolysis products with the aid of reagents. The introduction of this process into industry will make it possible to increase the production of low-molecular aromatics. [Abstracter's note: Complete translation.]

Card 2/2

29439

S/081/61/000/017/129/166

B117/B102

5.3300

AUTHORS: Mamedaliyev, Yu. G., Mamedaliyev, G. M., Aliyev, S. M.,
Suleymanov, G. N., Markhevka, V. M.

TITLE: Catalytic reforming of light oil obtained by pyrolysis of
hydrocarbon gases

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 17, 1961, 465, abstract
17M152 (Azerb. khim. zh., no. 6, 1960, 3 - 13)

TEXT: A study of reforming in the pseudoliquid layer of an aluminosilicate catalyst has shown that complete chemical stabilization of the crude can be achieved under the following conditions: atmospheric pressure, temperature of 320 - 380°C, and a feed rate of the crude of 0.5 - 0.75 hr⁻¹. The total yield in benzene, toluene, and xylenes is increased by 1.4 times, as compared with the method of sulfuric-acid purification. The results of laboratory tests were checked on an enlarged testing plant, and were found to be correct. The yield in aromatics amounted to 94 % by weight of the crude, including 60 % by weight of benzene, 22 % by weight of toluene, and

Card 1/2

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MAMEDALIYEV, Yu.G.; MAMEDALIYEV, G.M.; ALIYEV, S.M.; SULEYMANOV, G.N.;
MARKHEVKA, V.M.


Catalytic reforming of light oil from the pyrolysis of the
ligroin fraction of the Karadag gas condensate. Azerb.khim.
zhur. no.3:7-10 '60. (MIRA 14:8)
(Cracking process)

S/180/60/000/01/023/027

E071/E135

Catalytic Transformation of Cyclohexane over Aluminosilicates under
a Vacuo

characteristics of monomeric fractions of products of catalytic transformation of cyclohexane at atmospheric and 100 mm Hg pressure in Table 4; characteristics of the main fractions of monomeric products of catalytic transformation cyclohexene in Table 5. It was established that the application of a vacuo inhibits the reaction of redistribution of hydrogen and decreases the yield of the condensation products of the starting and formed cyclenes. It was shown that the process of catalytic treatment of cyclohexane over aluminosilicates under a vacuo (100 mm Hg) can be utilised for the preparation of 1-methylcyclopentene-1 (the yield of monomeric fraction containing about 55% of 1-methylcyclopentene-1 and about 14% of 1-methylcyclopentene-2, amount to 82%, while under atmospheric pressure the yield of monomeric fraction containing only about 20% of methylcyclopentenenes amounted to 59%). There are 1 figure, 5 tables and 10 references, of which 8 are Soviet and 2 English.



Card
2/2

SUBMITTED: October 29, 1959

S/180/60/000/01/023/027
E071/E135

AUTHORS: Mamedaliyev, G.M., and Topchiyev, A.V. (Moscow)

TITLE: Catalytic Transformation of Cyclohexane over
Aluminosilicates under a Vacuo

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh
nauk, Metallurgiya i toplivo, 1960, Nr 1, pp 158-163 (USSR)

ABSTRACT: Some results of an investigation of products of catalytic transformation of methoxylene, pseudocumene and cyclohexane in the presence of aluminosilicates at atmospheric pressure and various degrees of vacuo are described. The investigation of the transformation products was done using dispersion spectra. Cyclohexanol was used as a starting product. The experiments were carried out at 350 °C, volume velocity of 0.5-0.75 hr⁻¹, in a straight through reactor with a fluidized bed of microspherical aluminosilicate catalyst. The experimental set-up is shown in Fig 1. Analyses of the transformation products obtained at various depths of vacuo (1 atm 380, 200 and 100 mm Hg) are shown in Tables 2 and 3. The results of catalytic transformation of methoxylene and pseudocumene at 1 atm and 100 mm Hg are given in Table 1;

Card
1/2

SOV/20-125-3-28/63

Production of Aromatic Hydrocarbons by a Catalytic Treatment of Products of Thermal Cracking and of Petroleum Pyrolysis

tion in practice, the stocks of benzene and low-molecular alkyl benzenes will be considerably increased. There are 3 tables and 9 references, 8 of which are Soviet.

SUBMITTED: December 13, 1958

Card 3/3

SOV/20-125-3-28/63

Production of Aromatic Hydrocarbons by a Catalytic Treatment of Products of Thermal Cracking and of Petroleum Pyrolysis

toluene raw fraction (boiling limits 89.5-142.5°) of a pyrolysis plant. As initial substances the following were used: press distillate (30-199.5°), cracking petroleum (121-279°), and phlegm (boiling point 150°) of the factory Baku. A laboratory—like continuous flow reactor was used for the experiments (Ref 6). The action of various factors was investigated and the optimum parameter of the xylene economy was determined. In this treatment the hydrocarbons of the initial distillate are intensively aromatized. The yields of benzene, xylenes, of alkylaromatic components (149-180°) and of light gasoline (boiling up to 76°) oscillate according to the raw material composition within the ranges of 16-20, 29-44, 17-30, or 2-16%, as calculated on the cracking distillate. Better results were obtained by the treatment of the mixture with the toluene raw fraction (Tables 1,2). In the course of the treatment a high stabilization of the unsaturated hydrocarbons is attained, and their iodine number drops from 55-70 to 0.2-0.3. Table 3 shows the material balance of the treatment. Several advantages of the treatment suggested were proved in this way. Due to its applica-

Card 2/3

5(3)

SOV/20-125-3-28/63

AUTHORS:

Topchiyev, A. V., Academician, Mamedaliyev, G. M., Aliyev, S. M.

TITLE:

Production of Aromatic Hydrocarbons by a Catalytic Treatment of
Products of Thermal Cracking and of Petroleum Pyrolysis
(Polucheniye aromaticeskikh uglevodorodov kataliticheskoy
pererabotkoy produktov termicheskogo krekinga i piroliza nefi)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 3, pp 566-569
(USSR)

ABSTRACT:

The industrial production of benzene, toluene, and xylenes is of ever-increasing importance for the synthetics- and rubber industry, as well as for the production of synthetic fibers and detergents. The methods employed abroad (Refs 1-5) are complicated and rendered more difficult by various restrictions. By the example of the catalytic treatment of a mixture of various petroleum distillates with benzene (Refs 6-9) it was proved that an intensive aromatization of the hydrocarbons of the petroleum initial distillates takes place on aluminosilicates in this connection. In the work under review, the authors submitted to catalytic treatment the products mentioned in the title in the presence of toluene (boiling limits 110-111.2°) and of the

Card 1/3

Catalytic Conversion of Cyclohexene Into
Tetra-Alkyl-Benzene-and Dimethyl-Naphthalene
Hydrocarbons

SOV/20-125-2-28/64

dehydrated analogues of the hydrocarbons with a decalin structure as well as of other alkyl-substituted cyclenes. They are formed as intermediates in the conversion mentioned in the title. The results obtained permit the assumption that the cyclene conversion established in this investigation may assume vital importance in the processes of the thermo-catalytic processing of petroleum products and in the formation of aromatic hydrocarbons. There are 5 figures, 3 tables, and 13 references, 9 of which are Soviet.

SUBMITTED: December 13, 1958

Card 3/3

Catalytic Conversion of Cyclohexene Into
Tetra-Alkyl-Benzene-and Dimethyl-Naphthalene
Hydrocarbons

SOV/20-125-2-28/64

and cyclohexene. At 200° the dehydration of the former occurs without any noticeable transformation of the cyclohexene thus produced. A further temperature increase directs the process towards isomerization, cyclohexene polymerization, and the reaction of hydrogen redistribution.

The catalyzed substances from experiments at 350° and atmospheric pressure were separated into a monomeric and a polymeric fraction. The monomeric product boils out at 46-100° (Tables 1, 2). The unsaturated hydrocarbons account for 20.2% of it. About 76% of the fraction boils out at 70-73°. The product (according to the Raman spectrum) consists of more than 75% methyl-cyclopentane, some 20% methyl-cyclopentenenes, 4-5% cyclohexane, and 2-3% cyclohexene. The polymeric product boils out at 190-300° (Table 3). The main component of the 240-270° fraction is 1,2-dimethyl-naphthalene with admixture of 2,6- and 1,3-dimethyl-naphthalene. From the data obtained, the most probable reaction patterns (I-VII) are given. The unsaturated compounds contained in the polymeric products are incompletely

Card 2/3

5(3)
AUTHORS:

Topchiyev, A. V., Academician,
Mamedaliyev, G. M., Shishkina, M. V.,
Anikina, G. N., Kisilinskiy, A. N.

SOV/20-125-2-28/64

TITLE:

Catalytic Conversion of Cyclohexene Into Tetra-Alkyl-Benzene-
and Dimethyl-Naphthalene Hydrocarbons (Katalicheskoye
prevrashcheniye tsiklogeksena v tetraalkilbenzol'nyye i
dimetilnaftalinovyye uglevodorody)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 2, pp 341-344
(USSR)

ABSTRACT:

Several investigations have been made into the monomeric
fraction of the reaction products of the reaction mentioned
in the title (Refs 1-7), the polymeric products, however,
have neither been studied, nor has been elucidated the
reaction mechanism by which they are formed. In the paper
under consideration the authors present the results obtained
on the dehydration of cyclohexanol and on the catalytic
conversion of the resulting cyclohexene on alumo-silicates.
The work consists entirely of an experimental part. From
the results it was obvious that there is no essential
difference between the conversion products of cyclohexanol

Card 1/3

MAMEDALIYEV, Yu.G.; MAMEDALIYEV, G.M.; ALIYEV, S.M.; SARKISYAN, A.A.

Selective hydrogenation of olefinic hydrocarbons in the presence
of benzene. Azerb.khim.zhur. no.6:21-25 '59. (MIRA 14:9)
(Olefins) (Hydrogenation)

Preparation of Aromatic Hydrocarbons via the NOV/62-59-5-15/40
Catalytic Transformation of Coking Products of Coal, Pyrolysis, and Thermal
Cracking of Petroleum

catalyzates consists of the three isomers of xylene mainly
and is characterized by their low ethylbenzene content. There
are 1 figure, 8 tables, and 16 references, 11 of which are
Soviet.

ASSOCIATION: Institut nefiti Akademii nauk SSSR (Petroleum Institute of the
Academy of Sciences, USSR)

SUBMITTED: July 24, 1957

Card 4/4

Preparation of Aromatic Hydrocarbons via the TOM/52-59-5-15/10
Catalytic Transformation of Coking Products of Coal, Pyrolysis, and Thermal
Cracking of Petroleum

process; and table 8 the synthesis of xylenes by dealkylation of the hydrocarbons of the solvent of coke gas preparation and by conjugated alkylation of toluene. The figure shows the laboratory installation of the passage reactor used in the synthesis. All data obtained showed that with optimum conditions and the application of moderately increased pressure (3-15 at) the reactions of aromatization, dealkylation, and alkylation of the initial hydrocarbons are directed towards maximum formation of xylenes. With a single passage of the material through the reactor, the yield of xylenes ranges between 27.5-38 %, of benzene between 14-27 %, of light gasoline between 2.2-3.5 %, and of the alkylaromatic fraction between 14.4-20.6 % (149-180°). The presence of toluene in the mixture promotes the aromatization of the hydrocarbons of the cracking distillate by considerably suppressing the coking and gas formation. In addition to the aromatization of the initial hydrocarbons, the dealkylation reaction of polyalkyl benzenes and the conjugated alkylation of toluene gains importance with the formation of xylenes. The xylene fraction of the

Card 3/4

Preparation of Aromatic Hydrocarbons *via the* SOV/62-59-5-15/40
Catalytic Transformation of Coking Products of Coal, Pyrolysis, and Thermal
Cracking of Petroleum

student Aliyev (Ref 13) contains partial results of these investigations carried out with distillates of thermal cracking. The results of the synthesis of aromatic hydrocarbons on the basis of a catalytic treatment of industrial products of the thermal destruction of petroleum and coal solvent on synthetic aluminum silicates are mentioned in this work. The process of the catalytic aromatization of the products mentioned taking place in the presence of toluene and the crude toluene fraction of the light oils from pyrolysis was investigated. Table 1 shows the characteristics of the initial substances; table 2 the yield of the fraction constituents obtained with catalytic treatment of the distillate of thermal cracking with toluene; table 3 the characteristics of these products; table 4 the material balance of the process of catalytic treatment of the distillate in the absence of toluene; table 5 the characteristics of the crude toluene fraction; table 6 the characteristics and yields with catalytic treatment of the distillate in the presence of the crude toluene fraction; table 7 the material balance of this

Card 2/4

5 (3)

AUTHORS: Topchiyev, A. V., Mamedaliyev, G. M., SOV/62-59-5-15/40
Aliyev, S. M.

TITLE: Preparation of Aromatic Hydrocarbons via the Catalytic Transformation of Coking Products of Coal, Pyrolysis, and Thermal Cracking of Petroleum (Polucheniye aromaticeskikh uglevodorodov na baze kataliticheskoy pererabotki produktov koksovaniya uglia, piroliza i termicheskogo krekinga nefi)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 5; pp 861-874 (USSR)

ABSTRACT: The authors carried out investigations in order to develop new and more rational methods than those already existing for the synthesis of low molecular aromatic hydrocarbons. In connection with it one author found that benzene promotes the aromatization of hydrocarbons if the petroleum distillates are prepared on aluminum silicate in the presence of benzene; moreover, it causes large quantities of toluene, xylene, and other low molecular alkyl benzenes to be obtained. In this connection the effect of the presence of toluene in the synthesis of xylene had been investigated also in previous works (Ref 12). A short communication by the post-graduate

Card 1/4

The Production of Aromatic Hydrocarbons by
Catalytic Conversion of the Products of Heat
Cracking and Pyrolysis of Petroleum in the
Presence of Synthetic Aluminosilicates

67845
S/153/59/002/06/023/029
B115/B000

presence of benzene, it is demonstrated (Table 5) that catalytic splitting of the initial hydrocarbon is suppressed by the presence of an aromatic component in the mixture, the yields of gaseous products and coke are reduced, and the process is shifted towards an intense aromatization of the initial hydrocarbon. An attempt was made to realize the catalytic conversion of pure n-heptane, methyl cyclohexane, n-octane, and cyclohexane (containing no benzene) in a nitrogen current, but, however, no greater quantities of low-molecular hydrocarbons could be thus recovered, and the alkyl benzene content in the catalyzed products was not higher than 20% (related to the raw material). There are 5 tables and 10 Soviet references.

ASSOCIATION: Institut neftekhimicheskikh protsessov AN Azerb.SSR (Institute of Petrochemical Processes of the AS of the Azerb SSR)

Card 3/3

The Production of Aromatic Hydrocarbons by
Catalytic Conversion of the Products of Heat
Cracking and Pyrolysis of Petroleum in the
Presence of Synthetic Aluminosilicates

67845

S/153/59/002/06/023/029
B115/B000

hydrocarbons from the cracked distillates takes place, with considerable quantities of xylene isomers and other low-molecular alkyl benzenes being formed. Results obtained when cracked distillates are subjected to catalytic aromatization in the presence of raw aromatic fractions and light oils prepared by pyrolysis are given in tables (Tables 3 and 4). It was shown that a considerable increase in the yields of benzene, toluene, and xylene was reached, when the catalytic conversion was performed at moderately elevated pressures (5 to 25 atmospheres) and 525 to 550°, with cracking products mixed with products of pyrolysis because of the conjugated dealkylation - alkylation, isomerization - aromatization reactions of the initial hydrocarbons as well as of the redistribution of hydrogen. This procedure permits, contrary to the purification of light oil with sulfuric acid, a two- to threefold increase in the yield of aromatic hydrocarbons. On the example of the catalytic conversion of a number of individual paraffinic, naphthenic, and unsaturated hydrocarbons in the

Card 2/3

573300

5(3)

AUTHORS:

Topchiyev, A.V., Mamedaliyev, G.M., S/153/59/002/06/023/029
Aliyev, S.M. B115/B000

57845

TITLE:

The Production of Aromatic Hydrocarbons by Catalytic Conversion¹
of the Products of Heat Cracking and Pyrolysis of Petroleum in
the Presence of Synthetic Aluminosilicates

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya
tekhnologiya, 1959, Vol 2, Nr 6, pp 938-945 (USSR)

ABSTRACT:

In this paper, the main results obtained in the course of
investigations performed to study the production of low-
molecular aromatic hydrocarbons by the catalytic conversion of
pyrolytic and heat cracking products of petroleum are given. ✓
The catalytic aromatization of the first running, kerosene
fraction, and the reflux cracked in the presence of benzene,
toluene, raw aromatic fractions, and of a light oil prepared
by a pyrolytic method has been investigated. It was found
that on catalytic conversion of the first-running, the kerosene,
and the reflux in the presence of benzene (Table 1) or
toluene (Table 2) on synthetic aluminosilicates, simultaneously
with the destructive alkylation, an intensive aromatization of

Card 1/3

SOV/180-59-2-28/34
Redistribution of Hydrogen During the Catalytic Transformation of
Cyclohexene in the Presence of Aluminosilicates

finally form tetraalkylbenzene and dimethylnaphthalene
hydrocarbons; about 45% of the hydrogen required is
formed on account of the coke deposited on the catalyst.

There are 4 tables and 15 references, 13 of which are
Soviet, 1 English and 1 German.

SUBMITTED: December 13, 1958

Card 3/3

SOV/180-59-2-28/34

Redistribution of Hydrogen During the Catalytic Transformation of Cyclohexene in the Presence of Aluminosilicates

methylcyclopentenenes, which are then hydrogenated considerably to form methylcyclopentane. About 4% is hydrogenated to cyclohexene. The fractional composition of the polymer product (boiling range 190 - 300 °C) and the main properties of the fractions are shown in Table 3. The authors conclude that in the formation of the hydrocarbon component of the monomeric and polymeric products the following main cyclohexene transformation reactions are also involved: transformation of cyclohexene or methylcyclopentenenes into tetraalkylbenzenes, transformation of cyclohexene into dimethylnaphthalene hydrocarbons. On the basis of their reaction equations and data on the materials balance of the process, the authors have calculated approximately the quantities of hydrogen consumed and liberated in the catalytic transformation of cyclohexene over alumino-silicate. The results are shown in Table 4. It follows that about 55% of the hydrogen used in the hydrogenation of the monomeric fraction is from the number of intermediate compounds which

Card 2/3

SOV/180-59-2-28/34

AUTHORS: Mamedaliyev, G.M., and Topchiyev, A.V. (Moscow)

TITLE: Redistribution of Hydrogen During the Catalytic Transformation of Cyclohexene in the Presence of Aluminosilicates (Pereraspredeleniye vodoroda pri kataliticheskom prevrashchenii tsiklogeksena v prisutstvii alyumosilikatov)

PERIODICAL: Izvestiya akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Metallurgiya i toplivo, 1959, Nr 2, pp 148-154 (USSR)

ABSTRACT: The authors point out the growing importance of studies of the role of unsaturated hydrocarbons in the formation of oil-refining end-products. In their own work, described in this article, A.N. Kisilinskiy and M.V. Shishkina carried out spectroscopic investigations of reaction products while N.D. Vlasova and G.N. Anikina participated in the experiments. Cyclohexanol (boiling point 161 - 161.5 °C) was the starting material for the preparation of cyclohexene by dehydration over Al_2O_3 . The experiments were carried out at 350 °C and 1 atm in a laboratory fluidized-bed reactor already described by the authors (Ref 14). From the results (Tables 1, 2) for the monomeric product it was found that about 94 - 95% of the cyclohexene isomerises into

Card 1/3

MAMEDALIYEV, Yu.G.; MAMEDALIYEV, G.M.; ALIYEV, S.M.; SULEYMANOV, G.N.;
GASANOVA, Sh.I.

Production of xylenes by the catalytic processing of the
gas condensate in the presence of toluene. Azerb.khim.
zhur. no.2:3-15 '59. (MIRA 13:6)
(Xylene) (Condensate oil wells) (Toluene)

The Production of Aromatic Hydrocarbons by Catalytic
Treatment of Petroleum From Thermal Cracking in
Presence of Light Oil Obtained From Petroleum Pyrolysis

20-118-5-28/59

above 200°C is decreased from 30% to 10%. The fraction boiling above 200°C is increased. The iodine number is decreased from 61 to 0,2. The yield of the benzene, toluene, and xylene fractions are remarkably increased. The spectrum analysis of the xylene fraction of the catalysates shows many para-, ortho-, and mety-isomers, and much ethyl benzene 22 - 25%, 29 - 35%, 37,5 - 46%, and 2 - 5,7%. Table 4 contains the material results of characteristic experiments. Gaseous products of these experiments consisted of 86 - 87% methane, and its homologs, 9 - 10% hydrogen, and of 3 - 3,5% unsaturated hydrocarbons. There are 3 tables, and 8 references, all of which are Soviet.

ASSOCIATION: Institut nefiti Akademii nauk SSSR (Institute for Petroleum of the AS USSR)

PRESENTED: October 28, 1957, by A. V. Topchiyev, Member of the Academy

SUBMITTED: October 26, 1957

Card 3/3

The Production of Aromatic Hydrocarbons by Catalytic
Treatment of Petroleum From Thermal Cracking in
Presence of Light Oil Obtained From Petroleum Pyrolysis

20-118-5-28/59

in table 1. It was proved that in general the unsaturated hydrocarbons of the petroleum (contents 31,1%) have a cyclic structure (references 6, 7). The light oil of resin from the pyrolysis of the ethane-propane fraction contains unsaturated hydrocarbons (26,2%) which chiefly consist of styrene (90%), indene, and homologs. For the experiments a laboratory reaction tower with diffusion was used (scheme, references 1, 4). The initial mixtures, obtained catalysates and their main aromatic fractions are given in table 2 and 3. At 525°C, at a pressure of 15 atmospheres excess pressure and a diffusion velocity of 0,5e/e per hour a perfect chemical stabilization of the unsaturated hydrocarbons is reached by a single treatment of the mixture. Petroleum is fundamentally aromatized. The sulfonatability of the catalysate amounts to 92,3%. The contents of benzene, toluene and xylene are 41,4%, 15,1%, and 9,2% with reference to the catalysate. The bromine numbers of the obtained aromatic hydrocarbons vary between 0,08 and 0,2. Their sulfonatability is 94% - 97%. The yield amounts to 91% catalysate, 3,8% gas, and 4,6% coke. On optimum conditions a fundamental destruction of the petroleum hydrocarbons takes place. The yield of a fraction boiling

Card 2/3

AUTHORS: Mamedaliyev, G. M., Aliyev, S. M. 20-118-5-28/59

TITLE: The Production of Aromatic Hydrocarbons by Catalytic Treatment of Petroleum From Thermal Cracking in Presence of Light Oil Obtained From Petroleum Pyrolysis (Polucheniye aromaticeskikh uglevodorodov kataliticheskoy pererabotkoy kerosina termicheskogo krekinga v prisutstvii legkogo masla piroliza neftyanogo syr'ya)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 118, Nr 5, pp. 950-953 (USSR)

ABSTRACT: In the publications by the authors (reference 1 - 5) it was proved that in the catalytic treatment of petroleum distillates in presence of benzene and toluene over aluminium silicates a fundamental aromatization of the hydrocarbons takes place. The milieu of the aromatic compounds mentioned above favors the reaction. The reaction mentioned in the title above is of great practical importance. Besides a fundamental stabilization of the light oil an additional quantity of aromatic hydrocarbons of low molecular weight are obtained which become more and more important for modern petroleum-chemical syntheses. The initial products are characterized

Card 1/3

SOV/24-58-6-14/35
Demethylation and Isomeric Transformation of Meta-Xylene over
Aluminosilicates

the main reaction. This reaction was not appreciably influenced by raising the temperature to 500°C. No gas evolution occurred. The para-xylene content was about 20% and there were traces of ethylbenzene.

There are 3 tables and 16 references (7 English,
4 German and 5 Soviet)

Card 3/3

SOV/24-58-6-14/35

Demethylation and Isomeric Transformation of Meta-Xylene over
Aluminosilicates

taking place during the transformation over aluminosilicates of meta-xylene in the presence of benzene under toluene-producing conditions as: demethylation of xylene and methylation of benzene; redistribution of methyl groups - dismutation of xylene; isomerization of meta-xylene. Some experiments were carried out to study the meta-xylene isomerization reactions. The results (Table 3) show that at 480°C and 5 atm about 45% of the meta-xylene undergoes dismutation; part is isomerized into the ortho- and para-isomers (20-25% of para-xylene in the xylene fraction). At a pressure of 1 atm the toluene and trimethylbenzene yields fall to 9 and 13% respectively (about 15 and 20% at 5 atm). Practically complete suppression of the dismutation reaction occurred with further decreases in pressure: with a vacuum of 100 mm Hg isomeric transformation of meta-xylene became

Card 2/3

SOV/24-58-6-14/35

AUTHORS: ~~Mamedaliyev~~, G.M., Mamedaliyev, Yu.G. and Topchiyev, A.V.
(Moscow)

TITLE: Demethylation and Isomeric Transformation of Meta-Xylene
over Aluminosilicates (Demetilirovaniye i izomernoye
prevrashcheniye metaksilola nad alyumosilikatami)

PERIODICAL: Izvestiya Akademii Nauk, SSSR, Otdeleniye tekhnicheskikh
nauk, 1958, Nr 6, pp 91-95 (USSR)

ABSTRACT: The experiments described were carried out with benzene
(boiling range 77.8-80.4°C, specific gravity 0.8720) and
meta-xylene (boiling range 137-139°C) obtained from the
Khar'kovskiy koksokhimicheskiy zavod (Khar'kov By-Product
Coking Works). Aluminosilicate tablets and spheres made
by the Baku and Groznyy catalyst factories were used
as catalysts. With a meta-xylene : benzene ratio
(molecular) of 1 : 2 no appreciable changes occurred at
temperatures below 500°C and atmospheric pressure.
Further tests at 5, 7 and 15 atm showed that maximal
(27-28%) formation of toluene occurred at 5-7 atm (525°C
approximately). The properties (Table 2) of the benzene,
toluene and xylene fractions produced were up to
standard specifications. The authors list the reactions

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20-6-24/47

The Production of Xylenes by Dealkylation and by Conjugate Alkylation of Aromatic Hydrocarbons in the Presence of Synthetic Aluminum Silicates

supply of paraxylene and other low-molecular aromatic hydrocarbons may be considerably increased. There are 1 figure, 2 tables, and 1 Slavic reference.

SUBMITTED: May 15, 1957

AVAILABLE: Library of Congress

Card 3/3

20-6-24/47

The Production of Xylenes by Dealkylation and by Conjugate Alkylation of Aromatic Hydrocarbons in the Presence of Synthetic Aluminum Silicates

quantities. Toluene took no perceptible part in the reaction, as its quantity only slightly decreased. At 450-480°C a stronger dealkylation of the initial polyalkylbenzenes took place. The results of analysis of two characteristic catalysates and their aromatic fractions are given in tables 1 and 2. The application of pressure had a decisive effect. At 15 at. excess pressure and 480°C 28 % xylenes and about 7 % benzene were contained in the catalysate, as compared to 9,3 % and 1,5 % at atmospheric pressure. The yield at 15 at. pressure of catalysate, gas and coke, calculated on the raw material, was: 88, 4,8 and 4,2 percentage by weight. The gaseous reaction products consisted of methane and homologues, mixed with hydrogen. As table 2 shows, the aromatic fractions obtained under optimum conditions, practically do not contain any unsaturated, paraffinic or naphtenic hydrocarbons. The spectral analysis showed in the xylene fraction: about 25 % p-xylene, 45-50 % m-xylene, about 20-25 % o-xylene and not more than 2-3 % ethylbenzene. During the process under review the reactions of the dealkylation and the conjugate alkylation of the aromatic initial hydrocarbons take place simultaneously. The reaction of the toluene "dismutation" apparently also takes part in it to a certain extent. The xylene-synthesis described here is a promising process by which the

Card 2/3

AUTHORS:

MAMEDALIYEV, G. M. 20-6-24/47
Topchiyev, A. V. , Academician, and Mamedaliyev, G. M.

TITLE:

The Production of Xylenes by Dealkylation and by Conjugate Alkylation of Aromatic Hydrocarbons in the Presence of Synthetic Aluminum Silicates (Polucheniye ksilolov dealkilirovaniyem i sopryazhenym alkilirovaniyem aromaticeskikh uglevodorodov v prisutstvii sinteticheskikh alyumosilikatov)

PERIODICAL:

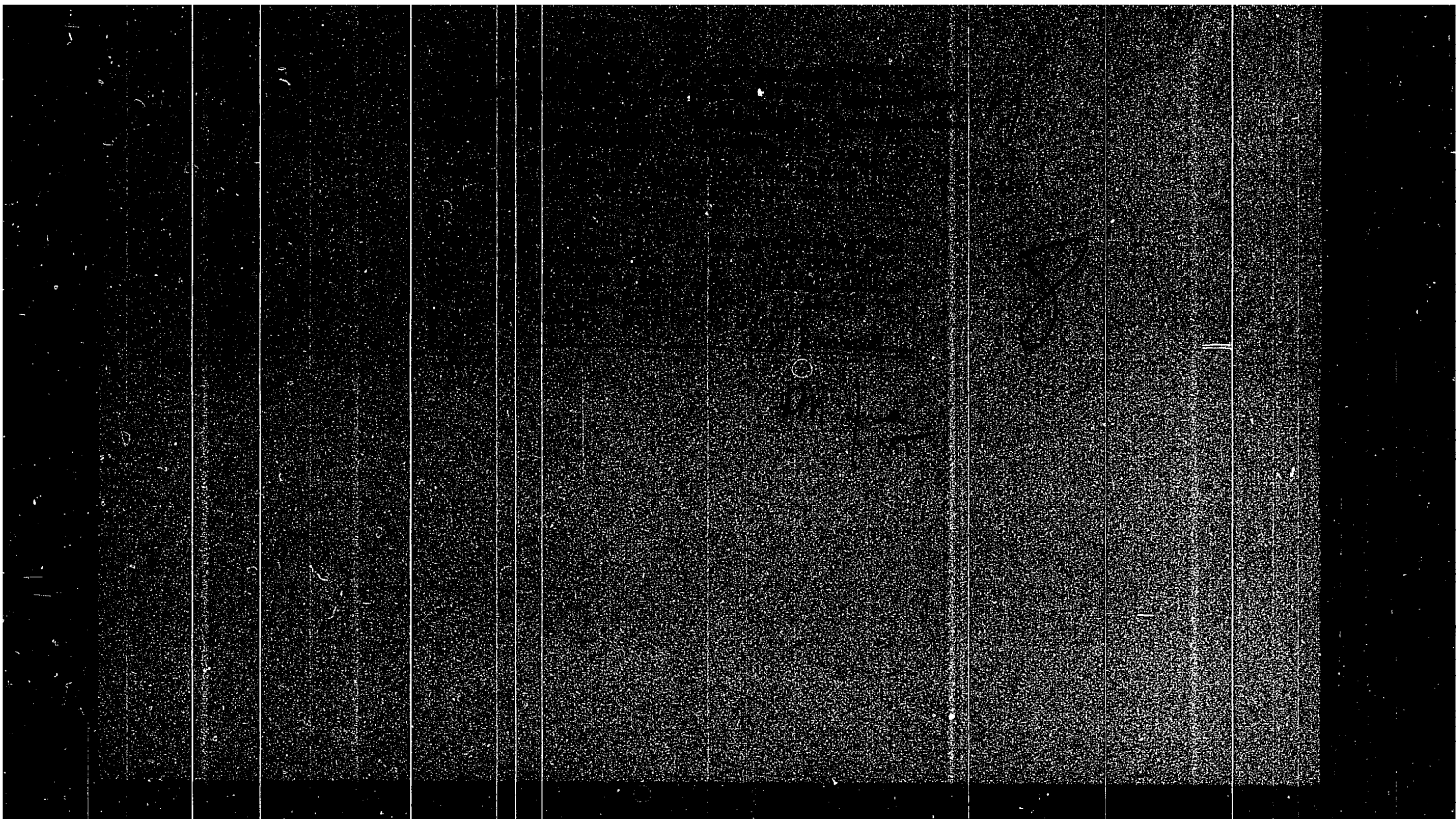
Doklady AN SSSR, 1957, Vol. 117, Nr 6, pp. 1007 - 1009 (USSR)

ABSTRACT:

The present report describes the chief data concerning the process of the catalytic treatment of a mixture of solvent and toluene on the silicates mentioned in the title. The solvent mainly represents a mixture of polyalkylbenzenes and was in an earlier work used for similar purposes (reference 1). From it the fraction boiling out above 150°C was used for the experiment. About 73 % of this product (fraction 160-175°C) predominantly consist of pseudocumene and mesitylene. Toluene was used as second component. The system of the laboratory-reactor suggested here is illustrated in figure 1. The solvent-toluene mixture (1:2) was studied with regard to the influence of pressure, speed and duration of the cycle of reaction. Furthermore the optimum parameter of the xylene-regime of the process were determined. Below 350°C xylenes only form in small

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000020-6



APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000020-6

The catalytic processing of light oil above synthetic aluminosilicates was studied and it was established that in the temperature range 300 to 460°C and pressures of 1.5 to 2 atm the complete chemical stabilisation of "non-limit" hydrocarbons is achieved as a result of the reaction of hydrogen redistribution. Formation of gases does not take place and the yield in the catalyst product and coke varies respectively within the limits 93 to 94% and 3.5 to 4%. The test set-up and the results are described in detail and the obtained data are summarised in Tables 1 and 2. N. D. Vlasova and L. S. Kovaleva participated in the experiments, A. N. Kisilinskiy carried out the spectral investigations. There are 2 figures, 2 tables and 10 references, 5 of which are Slavic.

Card 2/2

SUBMITTED: August 13, 1957.

ASSOCIATION: Oil Research Institute Ac.Sc. USSR (Institut Nefti AN SSSR)

AVAILABLE: Library of Congress.

MAMEDALIYEV G. M.

AUTHORS: Mamedaliyev, G. M. Topchiyev, A.V. (Moscow) 24-11-7/31

TITLE: Obtaining aromatic hydrocarbons by catalytic processing of light oil in the pyrolysis of ethane-propane fractions of oil gases. (Polucheniye aromaticeskikh uglevodorodov kataliticheskoy pererabotkoy legkogo masla piroliza etanpropanovoy fraktsii neftyanykh gazov).

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1957, No.11, pp. 57-62 (USSR)

ABSTRACT: A number of new industrial installations are being built for pyrolysis of oil gases, the thereby obtained pitch is considered a waste product. In this paper a process of catalytic transformation of the products of pyrolysis of oil distillates is described which can be extended for light oils obtained in the case of industrial pyrolysis of ethane-propane fractions of oil gases, which has been developed by one of the authors jointly with G. M. Mamedaliyev ("Catalytic processing of oil distillates at low pressures", Doctor Dissertation, Oil Research Institute (Institut Nefti) Ac.Sc., U.S.S.R., Moscow, 1954). It was established that the styrol content in the fraction separated from the light oil and boiling between 140 and 145°C exceeds 90% and that this product is of interest in itself as a starting material for various chemical

Card 1/2

SOV/81-59-7-24796

On the Nature of Unsaturated Hydrocarbons, the Products of Thermal Decomposition of Petroleum

The unsaturated ones of LO were mainly monoolefines of the cyclic and aromatic series, from which 75 - 80% were compounds of the styrene series. UH of the crude benzene fraction (b. p. 75 - 100°C) of LO were mainly a mixture of 5- and 6-membered cyclenes with one or two double bonds. Unsaturated hydrocarbons of PC mainly had a cyclic structure.

A. Ravikovich

Card 2/2

SOV/81-59-7-24796

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 7, p 462 (USSR)

AUTHORS: Mamedaliyev, G.M., Rzayeva, F.D.

TITLE: On the Nature of Unsaturated Hydrocarbons, the Products of Thermal Decomposition of Petroleum

PERIODICAL: V sb.: Sostav i svoystva neftey i benzino-kerosinovykh fraktsiy. Moscow, AS USSR, 1957, pp 369 - 401

ABSTRACT: Methods of selective hydrogenation (SH) and hydrostabilization (HS) were used to investigate the chemical structure-group composition of unsaturated hydrocarbons (UH) of light oil of pyrolysis (LO) and the products of thermal cracking (PC), i.e., press-distillate and kerosene. SH was carried out by passing the product and H₂ through a Ni-catalyst layer at temperatures of 130 - 285°C and atmospheric pressure; HS was carried out by passing the product through a layer of synthetic aluminosilicate catalyst at temperatures of 200 - 350°C and a pressure of 3 - 5 atm. As a result of HS complete hydrogenation of UH took place at the expense of the reaction of redistribution of H.

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ILLEGIBLE

ILLEGIBLE

ILLEGIBLE

ILLEGIBLE

DZHAFAROV, G.M.; MAMEDALIYEV, M.G.

Study of the cohesiveness of mortars with stone in masonry work
with certain shell limestones from Baku quarries. Izv. AN Azerb.
SSR no.9:3-16 S '56. (MLRA 9:11)
(Baku--Building stones) (Mortar)

ILLEGIBLE

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000020-6

MAMEDALIYEV, M. G.

27239. MAMEDALIYEV, M. G. - Mekhanicheskaya obrabotka khlopchatnika. Izvestiya azerbaydzh. S.-kh. In-ta im. Beriya, 1949, No. 1, s. 33-44. -Na azerbaydzh. Yaz. -Rezyume na rus. Yaz.

SO: Letopis' Zhurnal'nykh Statey, Vol. 36, 1949

MAMEDALIYEV, A.M.; SULTANOV, A.D., red.

[Petrography and conditions governing the Sarmatian
sedimentation of western Azerbaijan] Petrografiia i
uslovia osadkonakopleniia sarmatskikh otlozhenii Zapad-
nogo Azerbaidzhana. Baku, Izd-vo AN Azerbaidzh.SSR,
1965. 115 p. (MIRA 18:9)

MAMEDALIYEV, A.M.

Conditions governing the sedimentation in the Sarmatian of
western Azerbaijan. Izv. AN Azerb. SSR. Ser. geol.-geog.
nauk i nefti no.6:19-28 '62. (MIRA 16:4)

(Azerbaijan--Sedimentation and deposition)

MAMEDALIYEV, A. M.

Using limestones of the Gyuzdek plateau as a building stone.
Uch. zap. AGU. Geol.-geog. ser. no.1:43-46 '62,
(MIRA 16:1)

(Gyuzdek region--Limestone)
(Gyuzdek region--Building stones)

MAMEDALIYEV, A.M.

Lithology of Sarmatian deposits in the Kyasaman region (western Azerbaijan). Dokl. AN Azerb. SSR 17 no.12:1159-1163 '61.
(MIRA 15:2)

1. Azerbaydzhanskiy gosudarstvennyy universitet. Predstavleno akademikom AN AzSSR A.D.Sultanovym.
(Kyasaman region--Petrology)

MAMEDALIYEV, A.M.

Possibility of using bentonite clays of the Khanlar deposit as
a molding material. Dokl. AN Azerb. SSR 17 no.6:485-488 '61.
(MIRA 14:8)

1. Azerbaydzhanskiy gosudarstvennyy universitet. Predstavleno
akademikom AN Azerbaydzhanskoy SSR A.D. Sultanovym.
(Khanlar District--Bentonite) (Sand, Foundry)

MAMEDALIYEV A.M.

USSR/Cosmochemistry. Geochemistry. Hydrochemistry. D

Abs Jour : Referat. Zhurnal Khimiya. No 6, 1957. 18938.

Author : A.M. Mamedaliyev.

Inst : Azerbaijan University.

Title : Lithology of Sarmatian Deposits in Chobandag Region.

Orig Pub : Elmi Eserler Azerb. Univ., Ucn. Zap. Azerb. Un-ta.
1956, No 7. 47-50.

Abstract ; The Sarmatian deposits represented by a series of sandstones and clays were divided into 3 levels according to the mineralogical composition. On the basis the quoted chemical analyses of hydrochloric and water extracts it was established that the formation of deposits occurred under slightly acid, as well as slightly alkaline conditions (pH mainly 6 - 8). Decrease of carbonates and increase of the amounts of Fe_2O_3 and $CaSO_4$ were observed on the middle level.

MAMED, A., inzh.

Planning small shops. Stroi. mat. 4 no.1:29 Ja '58. (MIRA 11:2)
(Gypsum)

ILLEGIBLE

MAMDOV, Shakhhal; OSTPOV, O.B.; KHYDYROV, D.N.; AVANESYAN, M.A.;
AGAYEV, A.S.; GRISHINA, Ye.N.

The new contact insecticides efiran-79 and efiran-103 for
agricultural pests. Dokl. AN Azerb. SSR 17 no.10:937-940
'61. (MIRA 14:12)

1. Institut neftekhimicheskikh protsessov AN AzerSSR.
Predstavleno akademikom AN AzSSR G.A. Aliyevym.
(Insecticides)

ROLSKI, Stanislaw; DOBRZANSKA, Roza; MAMCZYC, Jerzy

New method for the isolation of arginine from protein hydro-
lyzates. Acta Pol. pharm. 21 no.6:527-528 '64

1. Z Zakladu Chemii Farmaceutycznej Akademii Medycznej w
Warszawie (kierownik: prof. dr. S. Rolski).

JANKOWSKI, Kazimierz; MAMCZAR, Bozena

Symptomatic schizophrenia in Schilder's diffuse sclerosis. Neurol. neurochir. psychiat. pol. 12 no.5:737-742 '62.

1. Z Kliniki Psychiatrycznej AM w Warszawie Kierownik Kliniki: prof. dr A. Jus i z Panstwowego Szpitala Psychiatrycznego w Pruszkowie
Dyrektor: dr F. Kaczanowski.

(ENCEPHALITIS PERIAXIALIS) (SCHIZOPHRENIA)

YURZHENKO, T.I.; ZAN'KO, A.A.; SERDYUKOVA, O.K.; MAMCHUR, L.P.

Polarographic and spectrophotometric study of some organic
peroxide compounds. Dokl. LPI 5 no. 1/2:41-47 '63.
(MIRA 17:6)

KIRILYUK, V.P.; LAYFMAN, Ye.M.; SIVORONOV, A.A.; CHEDZHEMOV, G.Kh.; MAMCHUR, G.P.; TS'ON', O.V.

New data on the absolute age determination of some geological formations in the Amazar-Shilka interfluvium (east Transbaikalia).
Geokhimiya no.12:1244-1255 D '64.

(MIRA 18:8)

1. Gosudarstvennyy ordena Lenina universitet imeni Iv. Franko, L'vov.

L 00373-66

ACCESSION NR: AP5021614

SUBMITTED: 19Nov62

ENCL: 00

SUB CODE: L 0

NO REF SOV: 000

OTHER: 000

Card

2/2

L 00373-66 EWT(d)/EED-2/EWP(1) IJP(c) BB/GG
 UR/0286/65/000/013/0090/0090
 ACCESSION NR: AP5021614

AUTHORS: Mamchits, V. A. ⁴⁴ Volkovitskiy, K. Ye. ⁴⁴

TITLE: Parallel ferrite diode subtracter. Class 42, No. 172560

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 13, 1965, 90

TOPIC TAGS: ferrite, logic circuit

ABSTRACT: This Author Certificate presents a parallel ferrite-diode subtracter of n-digit numbers in binary code. To decrease the shift extension time, the device consists of 2n pairs of input cores with coils for recording both numbers participating in the operation and their inverses and n output cores whose record coils are connected in series through diodes to the output coils of the input cores. In each digit corresponding to the logical functions of the subtracter the borrow absence and presence inputs are connected to the corresponding outputs which in turn are connected to the presence and absence inputs of the next digit. The outputs of the most significant digit are both interconnected and connected through a resistance to the borrow absence input of the least significant digit.

ASSOCIATION: none

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